



## **GENOTYPING KIT FOR DIAGNOSIS OF HUMAN PAPILLOMAVIRUS INFECTION AND PREPARATION METHOD THEREOF**

### **ABSTRACT**

The present invention relates to a genotyping kit for diagnosing patients infected with human papillomavirus (HPV), and a method for preparing the said kit.

The genotyping kit of the invention comprises microarray prepared by affixing via Schiff's base reaction of 5'terminal amine-linked DNA probes that have nucleotide sequences complementary to the DNA of HPV and aldehyde-derivatized surface of glass and biotin-binding protein to detect hybridization of biotin-labeling HPV DNA amplified product and the probe oligomer affixing to microarray. The kit can easily diagnose HPV infection, and can exactly determine the genotype of the HPV.

### **BACKGROUND OF THE INVENTION**

#### **[Field of the Invention]**

The present invention relates to a genotyping kit for diagnosis of human papillomavirus (HPV) infection, more specifically, to a genotyping kit for detecting humanpapillomaviruses from clinical samples of infected patients using a DNA chip, and a process for preparing the said genotyping kit in simple and accurate manner and in large quantities.

#### **[Background of the Invention]**

Uterine cancer includes cervical cancer, endometrial cancer, uterine sarcoma and the like. For cervical cancer, approximately 450, 000 new cases occur worldwide each year and approximately 6, 000 in Korea. Since the occurrence of cervical cancer (including cervical intraepithelialneoplasia) occupies 22.1% of total cancer cases in Korean women, the highest incidence with the second highest death rate, the prevention, diagnosis and treatment of cervical cancer are regarded as the most important issue in women's health.

Cervical cancer progresses through a precancerous stage, cervical intraepithelial neoplasia (CIN) known to be mainly caused by human papillomavirus (HPV) infection.

Especially, infection by particular types of HPV raises the possibility of developing invasive